

The listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. **(Currently Amended)** A solid oxide fuel cell device comprising: a flexible ceramic electrolyte sheet, said ceramic electrolyte sheet including a substantially homogeneously non-porous body of a varied thickness, said non-porous body having one side with a relatively smooth surface and another side with a more textured surface with multiple indentations arrayed therein, wherein the thickest part of said non-porous body is at least 0.5 micrometers greater than the thinnest part of said electrolyte sheet;

one side of said ceramic electrolyte sheet experiencing a predominately compressive force, the other side of said electrolyte sheet experiencing a predominately tensile force, wherein the side with a relatively smooth surface is subjected to the predominately tensile force and more textured surface subjected to predominately compressive force, wherein said electrolyte sheet includes thicker and thinner areas and the thickness of the electrolyte sheet changes progressively closer to the edges.

2. **(Currently Amended)** A fuel cell device comprising: a flexible ceramic electrolyte sheet, said ceramic electrolyte sheet including a substantially homogeneously non-porous body of a varied thickness with an average thickness of 3  $\mu\text{m}$  to 30 $\mu\text{m}$ , said non-porous body having one side with a relatively smooth surface and another side with a more textured surface with a predetermined pattern of multiple indentations therein, the thickest part of said non-porous being at least 0.5 micrometers greater than the thinnest part of said electrolyte sheet; and wherein said relatively smooth side is the fuel facing side and said more textured side is the air-facing side and said electrolyte sheet is bendable to an effective radius of curvature of less than 20 cm.

3. **(Previously Amended)** A fuel cell device comprising: electrolyte sheet, said electrolyte sheet including a substantially homogeneously non-porous body of a varied thickness, said non-porous body having one side with a relatively smooth surface and another side with a more textured surface with multiple indentations arrayed therein, wherein the thickest part of said non-porous body is at least 0.5 micrometers greater than the thinnest part of said electrolyte sheet;

one side of said electrolyte sheet experiencing a predominately compressive force, the other side of said electrolyte sheet experiencing a predominately tensile force, wherein the side with a relatively smooth surface is subjected to the predominately tensile force and more textured surface subjected to predominately compressive force, wherein said electrolyte sheet includes thicker and thinner areas and the thinner areas become progressively thinner closer to the edges.

4. **(Previously Amended)** The fuel cell device of claim 1, wherein said electrolyte sheet is subjected to higher stress in some regions and to lower stress in other regions, said regions experiencing higher stress having an average thickness that are greater than the average thickness being of the regions experiencing lesser stress.

5. **(Previously Amended)** The fuel cell device of claim 1, wherein said electrolyte sheet is subjected to higher relative pressure in some regions and to lower relative pressure in other regions, said regions experiencing higher pressure having an average thickness that is greater than the average thickness of the regions experiencing low pressure.

6. **(Previously Amended)** The fuel cell device of claim 1, wherein the thickest part of said electrolyte sheet is at least 2 micrometers greater than the thinnest part of said electrolyte sheet.

7. **(Previously Amended)** The fuel cell device of claim 1, wherein said electrolyte sheet has an average thickness greater than 5 micrometers and less than 100 micrometers.

8. **(Previously Amended)** The fuel cell device of claim 1, wherein said average thickness is below 45 micrometers.

9. **(Currently Amended)** The fuel cell device of claim 1, wherein said electrolyte sheet has an average electrolyte sheet thickness between 3 micrometers and 30 micrometers;

said fuel cell device further includes: at least one cathode disposed on the more textured side of said electrolyte sheet;

at least one anode disposed opposite the cathode on the relatively smooth side of said electrolyte sheet,

wherein at least 50% of the area of the electrolyte sheet situated under said at least one cathode and said at least anode, has a thinner body than the rest of the electrolyte sheet situated under said at least one cathode and said at least anode.

10. **(Previously Amended)** The fuel cell device according to claim 1, wherein the electrolyte sheet is a ceramic sheet formed of a polycrystalline ceramic selected from a group consisting of partially stabilized zirconia or stabilized zirconia, and being doped with a dopant selected from the group consisting of the oxides of Y, Ce, Ca, Mg, Sc, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu, In, Ti, Sn, Nb, Ta, Mo, W and mixtures thereof.

11. **(Original)** The fuel cell device according to claim 10, wherein said average electrolyte sheet thickness is between 4 and 15 micrometers.

12. **(Currently Amended)** The fuel cell device according to claim 1 ~~11~~, wherein said electrolyte sheet ~~is flexible~~ has ohmic resistance less than 0.5 ohms/cm<sup>2</sup>.

13. **(Cancelled)**

14. **(Cancelled)**

15. **(Cancelled)**

16. **(Cancelled)**

17. **(Cancelled)**

18. **(Cancelled)**

19. **(Cancelled)**

20. **(Cancelled)**

21. **(Cancelled)**

22. (Cancelled)

23. (Cancelled)

24. (Cancelled)

25. (Cancelled)

26. (Cancelled)

27. (Cancelled)

28. (Cancelled)

29. (New) The fuel cell device according to claim 1, wherein said electrolyte sheet has ohmic resistance less than  $0.2 \text{ ohms/cm}^2$ .

30. (New) The fuel cell device according to claim 9, wherein there are multiple thinner electrolyte sheet areas under said at least one cathode and said at least anode.

31. (New) The fuel cell device according to claim 1, wherein there are the thinner areas of said electrolyte sheet are textured.

32. (New) The fuel cell device according to claim 9, wherein at least 75% of the area of the electrolyte sheet situated under said at least one cathode and said at least anode has a thinner body than the rest of the electrolyte sheet situated under said at least one cathode and said at least anode.